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25X1

CIA IMAGERY ANALYSIS DIVISION

PIR 75018

25X1

CHINESE POWER PLANTS

1

KIANGSU PROVINCE SHANG-HAI MUNICIPALITY

- (A) Min-hang Thermal Power Plant
- (B) Nan-ching Thermal Power Plant (Hsia-kuan)
- (C) Nan-ching Thermal Power Plant (Ta-chang-chen)
- (D) Shang-hai Thermal Power Plant (Cha-pei)
- (E) Shang-hai Thermal Power Plant (Nan-shih)
- (F) Shang-hai Thermal Power Plant (Wu-ching)
- (G) Shang-hai Thermal Power Plant (Yang-shu-pu)
- (H) Wu-hsi Thermal Power Plant (Wang-ting)

REQUIREMENT

C-RR5-83,218

CIA/IAD PROJECT

30647-6



	CIA IMAGERY ANALYSIS DIVISION	PIR 75018
25X1	MIN-HANG THERMAL POWER PLANT NPIC NUMBER - 48-B1	
Huang-pu Chia at 30 59 20N includes a co house, a prob	hang Thermal Power Plant is located on the ng (River) 12.0 nm south of Lung-hua Airf: - 121 22 40E. The plant is coal-operated al storage/processing building, coal conveable control house, two substations with a several support/storage buildings.	ield (Shang-hai) , water-served and eyor system, control
boiler units. connect to free western section dust-catcher, units. The grant has six operations small cape visible between of the sets of equipment. The with a single be discerned,	erhouse is of two distinct designs and pro- The eastern section appears to have four ee-standing masonry stack A, suggesting for on (serviced by free-standing stack B) is two sets of two-duct flues, and probably enerator hall is divided into two distinct ble units. The eastern section is unusual acity generators. Four sets of generator en this section and the substation, indicate f leads connect with transformers and the he western generator hall section is higher longitudinal monitor. Although no generator the presence of two large transformers of at two units are operable.	r separate flues which our units. The taller equipped with a single has two larger boiler t sections and probably lly low and doubtlessly cable leads are ating four units. Three fourth with switching er and is equipped ator cable leads could

25X1

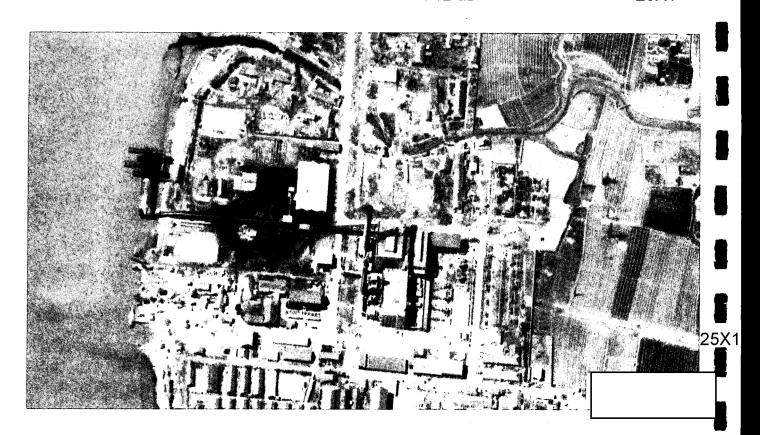
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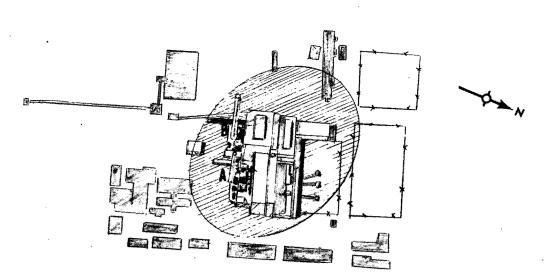
Approved For Release 2003/03/04 : CIA-RDP78 T05161A001200010003-3

PIR 75018 FIGURE 2

MIN-HANG THERMAL POWER PLANT

25X1





Approved For Release 2003/93/04/CREA RDP78T05161A001200010003-3

25X1

25X1

25X1

CIA IMAGERY ANALYSIS DIVISION

PIK 75018

25X1

MIN-HANG THERMAL POWER PLANT

CONSTRUCTION ACTIVITY	LEVEL OF PRODUCTION
None	Light smoke from stacks A and B.
None	Light smoke from stack A.
Construction of a probable control building is under-way.	Heavy smoke from stack A.
may •	
Construction of probable control building still incomplete.	Moderate smoke from stack A. Light smoke from stack B.
incomplete.	
Probable control building	Moderate smoke from stack A.
appears complete.	Light smoke from stack B.
Poor quality coverage precludes assessment.	Heavy smoke from stacks A and B.

Approved For Release 2003/03/04: CIA-RDP781 05161A0012000/1900β-3

CIA IMAGERY ANALYSIS DIVISION

PIR 75018

25X1

25X1

MIN-HANG THERMAL POWER PLANT

PHOTO DATA	CONSTRUCTION ACTIVITY	LEVEL OF PRODUCTION
	None	Light smoke from stack A.
	None	Light smoke from stack A.
	None	Moderate smoke from stack A. Light smoke from stack B.

25X1

NAN-CHING THERMAL POWER PLANT (HSIA-KUAN)

NPIC NUMBER - 17-P1

25X1

25X

Nan-ching Thermal Power Plant (Hsia-kuan) is located within the boundaries of the Nan-ching Pu Kou Port Facilities on the east bank of the Chang Chiang (River) at coordinates 32 05 20N - 118 43 30E. The facility is water-served, coal-operated and consists of two powerhouses, two control houses with five or six visible transformers, a ship-unloading system, coal-processing and conveying facilities, administration building and numerous support/storage buildings.

An old powerhouse is located in the western end of the complex and has two metal roof-stacks (A and B) and a connecting control house. No power-cables were visible. A small substation may be located adjacent to the southeast side of the powerhouse. The larger and newer powerhouse is of divers design and appears to contain at least six boiler units. The western boilerhouse section has three sets of two-duct flues which connect with free-standing masonry stack C, indicating three units. The eastern section appears to have three single flues which connect with stack C, also indicating three boiler units. No power leads could be discerned; however, probably as many as six transformers are located adjacent to the southern side of the generator hall.

There has been no significant new construction during the period

25X1

25X1

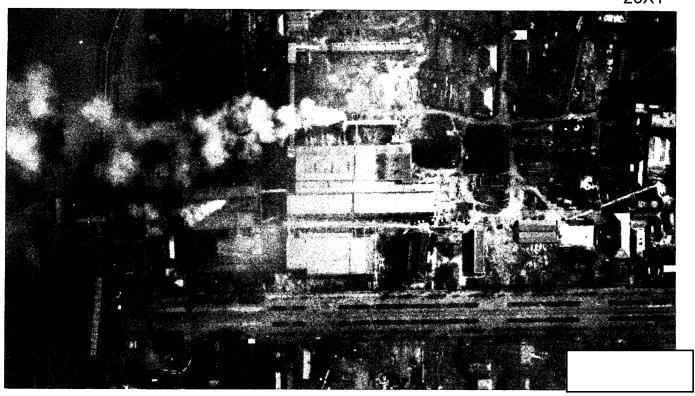
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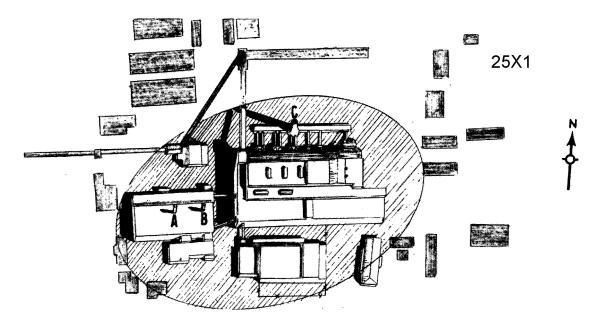
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25X1

PIR 75018 FIGURE 3

NAN-CHING THERMAL POWER PLANT (HSIA-KUAN)





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25X1

25X1

25X1

CIA IMAGERY ANALYSIS DIVISION

PIR 75018

NAN-CHING THERMAL POWER PLANT (HSIA-KUAN)

None	Moderate smoke from stack C. Light smoke from stack A.
None	Moderate smoke from stack A. Light smoke from stack C.
None	Light smoke from stacks A and C.
None	Heavy smoke from stack C. Moderate smoke from stack A. Light smoke from stack B.
None	Heavy smoke from stacks A and C.
	·
	None None

Approved For Release 2003/03/24 RDP781 05161A001200010003-3

25X1

25X1

25X1

CIA IMAGERY ANALYSIS DIVISION

PIR 75018

NAN-CHING THERMAL POWER PLANT (HSIA-KUAN)

CONSTRUCTION ACTIVITY	LEVEL OF PRODUCTION
None	Moderate smoke from stacks A and C.
None	Heavy smoke from stacks A and C.
	DECLY DECLE TION SOCIETY OF CITY OF
None	Moderate smoke from stack C. Light smoke from stack B.
None	Heavy smoke from stacks A and C.
Possible alteration of flue system apparent.	Heavy smoke from stacks A and C.
	25X1

	CIA IMAGERY ANALYSIS DIVISION	PIR 75018
25X1	NAN-CHING THERMAL POWER PLANT (TA- NPIC NUMBER - 17-T	CHANG-CHEN)
the Chen Chen (River) at coal-operates substation	an-ching Thermal Power Plant (Ta-chang- nia Wa Port Facilities on the north bank coordinates 32 12 05N - 118 45 05E. The ted and includes a control house, probak with two transformers, coal processing building, two water basins, and several	k of the Chang Chiang he plant is rail-served, ble administration building and conveying facilities,
two sets of hall has a	oilerhouse has two sets of dust-catchers f four-duct flues to free-standing mason single longitudinal monitor and two sets connect with the control house, indicating the control house.	nry stack A. The generator ts of three-cable power
	bable administration building was added e only new construction evident during	

-7-

25X1

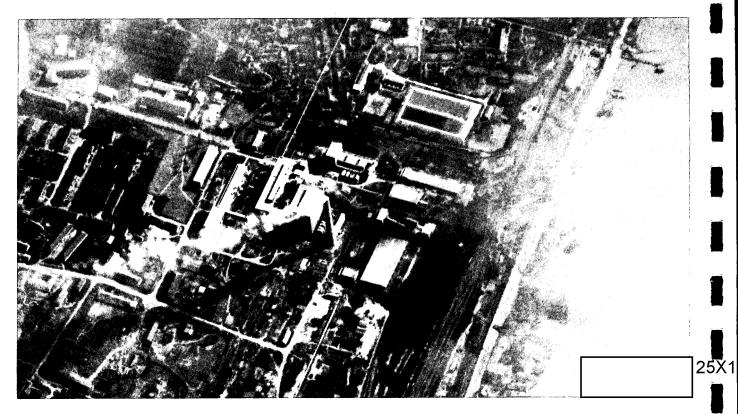
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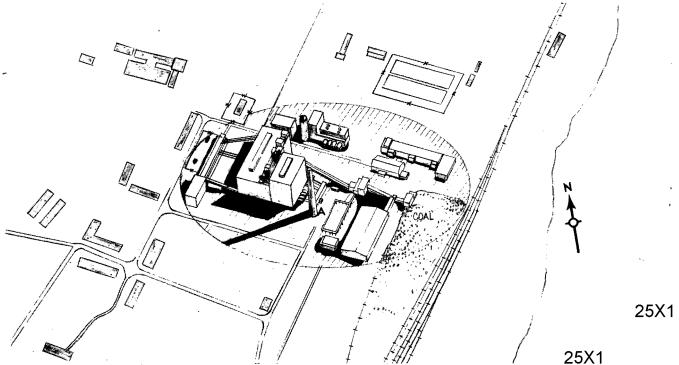
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Approved For Release 2003/03/04 : GHA-RDP78T05161A001200010003-3

PIR 75018 FIGURE 4

NAN-CHING THERMAL POWER PLANT (TA-CHANG-CHEN)





Approved For Release 2903/03/04: RDP78T05161A001200010003-3

25X1

25X1

CIA IMAGERY ANALYSIS DIVISION

PIR 75018

NAN-CHING THERMAL POWER PLANT (TA-CHANG-CHEN)

25X1 25X1

'		
	CONSTRUCTION ACTIVITY	LEVEL OF PRODUCTION
	Foundations for a probable administration building are visible north of the power-house.	Light smoke from stack A.
	The probable administration building previously observed under construction is now complete.	Moderate smoke from stack A.
	None	Moderate smoke from stack A.
	None	Heavy smoke from stack A.
	None	Moderate smoke from stack A.
	None	Heavy smoke from stack A.

Approved For Release 2003/03/04 RDP78T05161A001200010003-3

CIA IMAGERY ANALYSIS DIVISION

PIR 75018

25X1

NAN-CHING THERMAL POWER PLANT (TA-CHANG-CHEN)

25X1

CONSTRUCTION ACTIVITY LEVEL OF PRODUCTION None Heavy smoke from stack A. None Moderate smoke from stack A.

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25X1

SHANG-HAT THERMAT, POWER PLANT (CHA-PEI)

NPIC NUMBER - 28-Y9

25X1

25X1

The Shang-hai Thermal Power Plant (Cha-pei) is located on the south bank of the Huang-pi Chiang 1.4 nm west of Chiang-wan Airfield at coordinates 31 20 31N - 121 31 27E. The facility is coal-operated, rail and water served and includes two separated plants, a control house, substation with at least six transformers and extensive coal unloading and conveying facilities.

The smaller and older plant has a boilerhouse equipped with six metal roof-stacks; the location of the stacks suggest that six boiler units are present. The generator hall has no visible power-cables or other indicators of the number of generators. The new plant appears to be equipped with three and possibly four boiler units, including an unusually large and oddly placed section which is equipped with two sets of dust-catchers. The generator hall appears to be connected to the control house by two sets of three-cable power leads; one and possibly two sets of power leads lead to the bank of three transformers located at the western end of the generator hall.

No construction has occurred

25X²

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PIR 75018 FIGURE 5

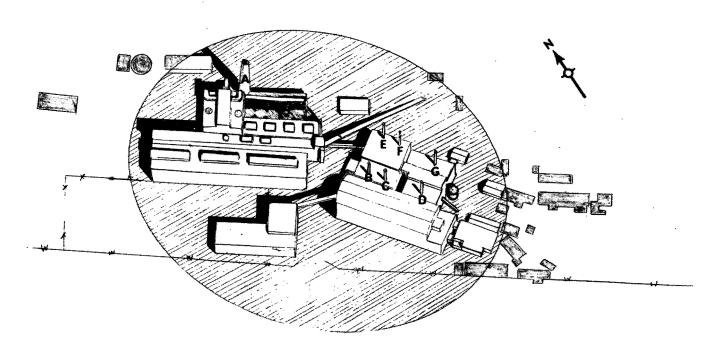
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SHANG-HAI THERMAL POWER PLANT (CHA-PEI)



25X1



25X1

25X1

CIA IMAGERY ANALYSIS DIVISION

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25X1

25X1

25X1

SHANG-HAI THERMAL POWER PLANT (CHA-PEI)

CONSTRUCTION ACTIVITY	LEVEL OF PRODUCTION
	Poor quality coverage precluded analysis.
None	Heavy smoke from stack A. Possible light smoke from stacks F and G.
None	Heavy smoke from stack A. Light smoke from stacks B, C, D, E, F, and G.
None	Heavy smoke from stack A. Poor coverage precludes analysis of other stacks.
None	Heavy smoke from stack A. Light smoke from several of the stacks in the older powerhouse, but poor quality photography precludes further analysis.
None	Light smoke from stack A. Light smoke from stacks C, D, E, and G.

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25X1

25X1

CIA IMAGERY ANALYSIS DIVISION

PIR 75018

25X1

25X1

25X1

SHANG-HAI THERMAL POWER PLANT (CHA-PEI)

CONSTRUCTION ACTIVITY	LEVEL OF PRODUCTION
None	Heavy smoke from stack A. Wisp of smoke from stack F.
None	Heavy smoke from stack A.
None	Heavy smoke from stack A.

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25X1

SHANG-HAI THERMAL POWER PLANT (NAN-SHIH) NPIC NUMBER - 28-R5

The Shang-hai Thermal Power Plant (Nan-shih) is located on the west bank of the Huang-pu Chiang (River) at coordinates 31 12 08N - 121 29 40E. This plant is water-served, coal-operated and consists of ship-unloading facilities, coal conveying and processing equipment, control house with two transformers, four oil-storage tanks and several support/storage buildings.

The boilerhouse has five small metal roof stacks and one short monitor; no dust-catchers are visible. At least three sets of power cables appear to link the generator hall and control house; available photography was too poor to definitely establish the exact number. A flat-roofed building is located within the compound containing the control house and the two visible transformers and probably houses transformers or switching equipment.

There has been no new construction during the period

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25X1

-13-

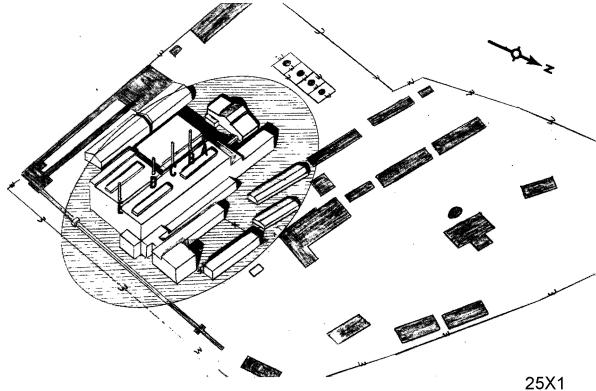
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25X1

PIR 75018 FIGURE 6

SHANG-HAI THERMAL POWER PLANT (NAN-SHIH)





25X1

2<u>5</u>X1

Approved For Release 2003/03/04 CREA RDP78T05161A001200010003-3 25X1 25X1 CIA IMAGERY ANALYSIS DIVISION PIR 75018 25X1 SHANG-HAI THERMAL POWER PLANT (NAN-SHIH) 25X1 CONSTRUCTION ACTIVITY LEVEL OF PRODUCTION None No smoke apparent. None No smoke apparent. Light smoke from stacks A, B, C, None and D. None Light smoke from stacks B, C, and D. None Possible light smoke from stack B.

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CIA IMAGERY ANALYSIS

PIR 75018

25X1

SHANG-HAI THERMAL POWER PLANT (NAN-SHIH)

CONSTRUCTION ACTIVITY	LEVEL OF PRODUCTION
None	Possible light smoke from stack D.
None	Light smoke from stacks A, C, and E.
None	Light smoke from stack D and possib stack C.
None	Appears to be light smoke from stack D and possibly B or C.
None	Appears to be smoke from stacks A and C.
None	No smoke apparent.

25X1	CIA IMAGERY ANALYSIS	DIVISION PLR 75018	
25X1	SHANG-HAI THERMAL POWER PLANT (NAN-SHIH)		
	CONSTRUCTION ACTIVITY	LEVEL OF PRODUCTION	
	None	Appears to be smoke from stacks AB, D, and E.	
·			

Approved For Release 2003 (1270) A-RDP78T05161A001200010003-3 CIA IMAGERY ANALYSIS PIR 75018 25X1 25X1 SHANG-HAI THERMAL POWER PLANT (WU-CHING)

The Shang-hai Thermal Power Plant (Wu-ching) is located in the southern section of the Shang-hai Coke Chemical Plant along the Huang-pu Chiang (River) at coordinates 31 03 42N - 121 28 06E. The plant is water-served, coal-operated and consists of ship unloading facilities, coal processing and conveying systems, substation with control house, seven to ten transformers, and numerous support/storage buildings.

NPIC NUMBER - 48-Cl

The boilerhouse contains five sets of dust-catchers and is connected to stack A by four sets of flues and to stack B by one set of flues. The recent placement of stack B indicates that considerable expansion may be expected in the future. The generator hall has two longitudinal monitors and four visible sets of power leads to the substation. A fifth set of leads possibly exists, indicating four or possibly five operable generator units.

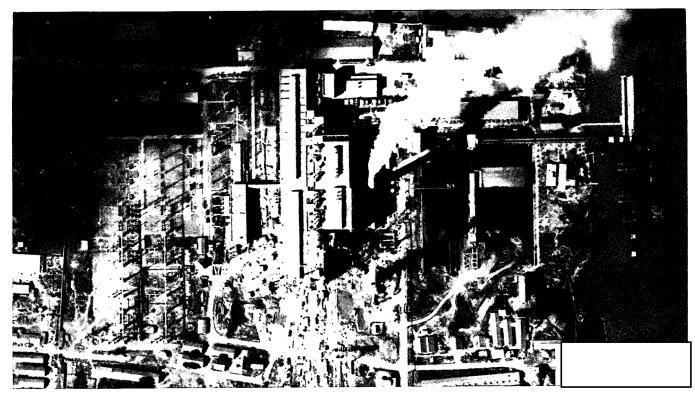
Considerable change has occurred during the period One boiler unit, the southern one-half of the generator hall, stack B and an addition to the control house were completed. One or possibly two sets of power cables were added to the three sets first discernable 25X1 25X1

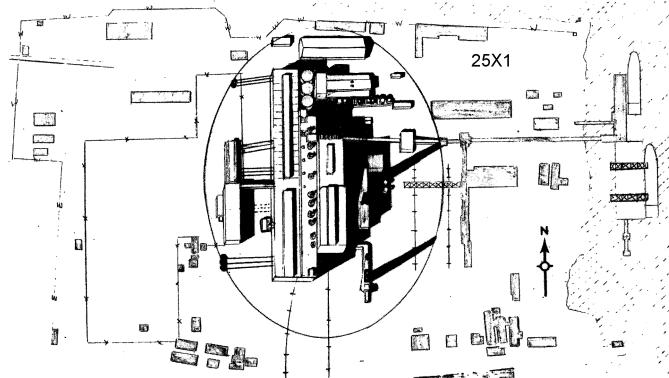
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PIR 75018

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SHANG-HAI THERMAL POWER PLANT (WU-CHING)



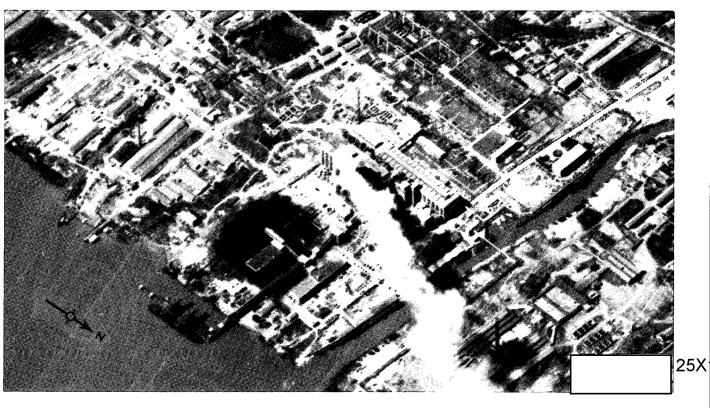


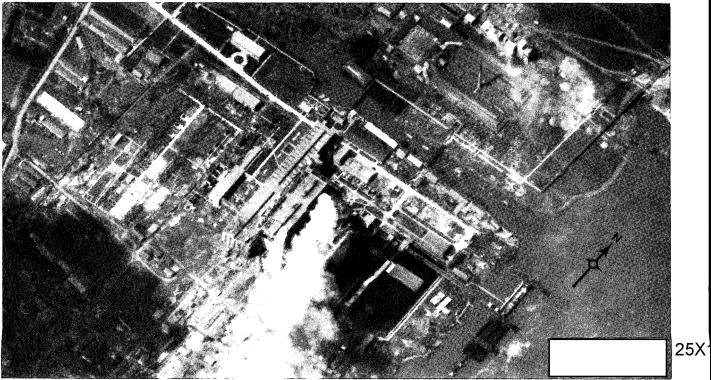
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25X1

PIR 75018 FIGURE 8

SHANG-HAI THERMAL POWER PLANT (WU-CHING)





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25X1	CIA IMAGERY ANALYSIS DI	PIR 75018
25X1	SHANG-HAI THERMAL POWER PL	ANT (WU-CHING) 25X1
	CONSTRUCTION ACTIVITY	LEVEL OF PRODUCTION
	Footings and uprights for generator hall and control house additions are apparent.	Moderate smoke from stack A.
	Extension of generator hall is complete; footings for an addition to the south end of the control house are still evident.	Heavy smoke from stack A.
	Poor quality coverage pre- cludes analysis.	Heavy smoke from stack A.

A large hole is evident at the future site of stack B.
No other changes noted.

Stack B and the addition to the control house are complete. Foundations are evident for a second addition to the generator hall.

The new addition to the generator hall appears largely complete. Ground preparation for the addition of a new boiler unit has begun.

Heavy smoke from stack A.

Heavy smoke from stack A.

25X1

CIA IMAGERY ANALYSIS DIVISION

PIR 75010

25X1

SHANG-HAI THERMAL POWER PLANT (WU-CHING)

_		
	CONSTRUCTION ACTIVITY	LEVEL OF PRODUCTION
	A boiler unit equipped with a set of dust-catchers has been installed in the section under construction; no uprights or roof members are apparent. The generator hall is complete except for very minor work on a corner of the roof.	
	Smoke obscured the south end of the powerhouse; no construction activity was apparent elsewhere.	Heavy smoke from stack A.
	The boilerhouse addition appears to be complete. No current activity is evident.	Heavy smoke from stack A.
	Stack B has been connected to the boilerhouse by a single flue. A second catwalk or cable gallery has been added between the generator hall and control house One set of power cables has	Heavy smoke from stack A. Moderate smoke from stack B.
	been added between the southern end of the generator hall and a large transformer; another set possibly exists between the southern generator hall section and the control house.	

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	SHANG-HA	AI THERMAL PO	WER PLANT (YANG-	SHU PU)	
		NPIC NU	MBER - 28-R6		
bank of the at coordina water-serve	e Huang-pu Ch stes 31 16 21 ed and includ	niang (River) N - 121 33 1 Nes extensive	ant (Yang-shu Pu 4.0 nm southwes 3E. This facili coal unloading ol house and num	t of Chiang- ty is coal-c and conveying	wan Airfield perated, ag facilities,
heterogened sections hi roof-stacks	ous construct ighly specula s and one fre	tion makes and ative. The peee-standing,	ed several times y analysis of the owerhouse does howesonry stack. dicators of the	e boiler and ave eleven a The generate	d generator short metal or hall has
0.111					
	has been no	construction	during the peri	od	
	has been no	construction	during the peri	od.	
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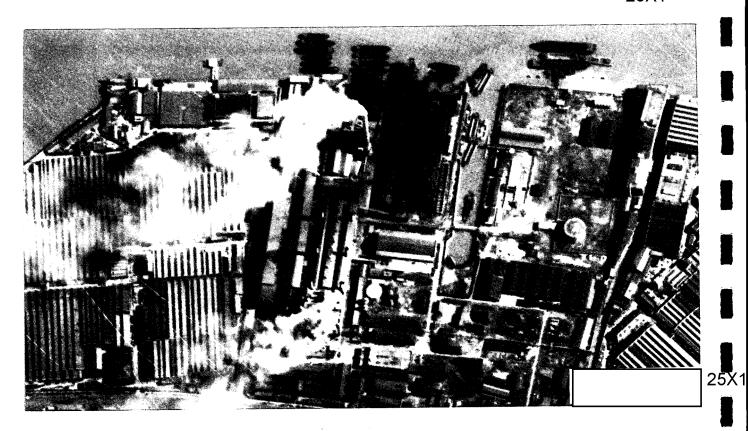
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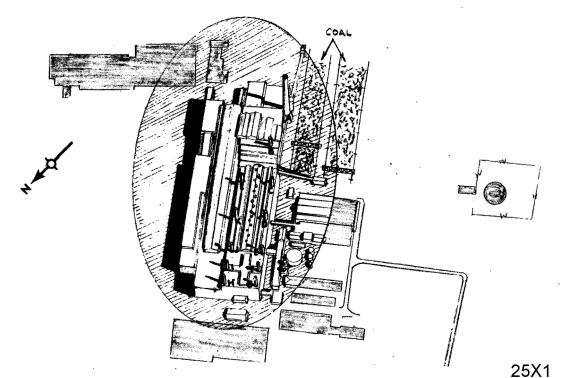
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PIR 75018 FIGURE 9

_{U)} 25X1 _{25X1}

SHANG-HAI THERMAL POWER PLANT (YANG-SHU PU)





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25X1

25X1

CIA IMAGERY ANALYSIS DIVISION

PIR 75018

25X1

SHANG-HAI THERMAL POWER PLANT (YANG-SHU PU)

CONSTRUCTION ACTIVITY	LEVEL OF PRODUCTION
No construction apparent.	Poor quality coverage precludes analysis.
None	Heavy smoke from stack A. Light smoke from stack L. Poor quality coverage precludes further analysis.
None	Heavy smoke from stack A. Moderat smoke from stacks F, G, H, I, and L.
None	Heavy smoke from stack A. Light smoke from stacks F, G, and I. Po quality coverage precludes further analysis.
None	Heavy smoke from stacks A and I. Moderate smoke from stacks E and L
None	Heavy smoke from stack A. Light smoke from stacks F, G, H, and I.
	None None None None

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25X1	SHANG-HAI THERMAL POWER PLANT (YANG-SHU PU)	
	in the Level	OF PRODUCTION
	Heavy smoke from stace	
	Heavy smoke from stace smoke from stace	om stack A. M cks F, G, H, a
	Heavy smoke from stacks	

Heavy smoke from stack A. LightLEGIB smoke from stacks F, G, H, and L. Possible very light smoke from stacks K and L.

Light

Moderate and I. Light

Light and I.

25X1

WU-HSI THERMAL POWER PLANT (WANG-TING) NPIC NUMBER - 41-E

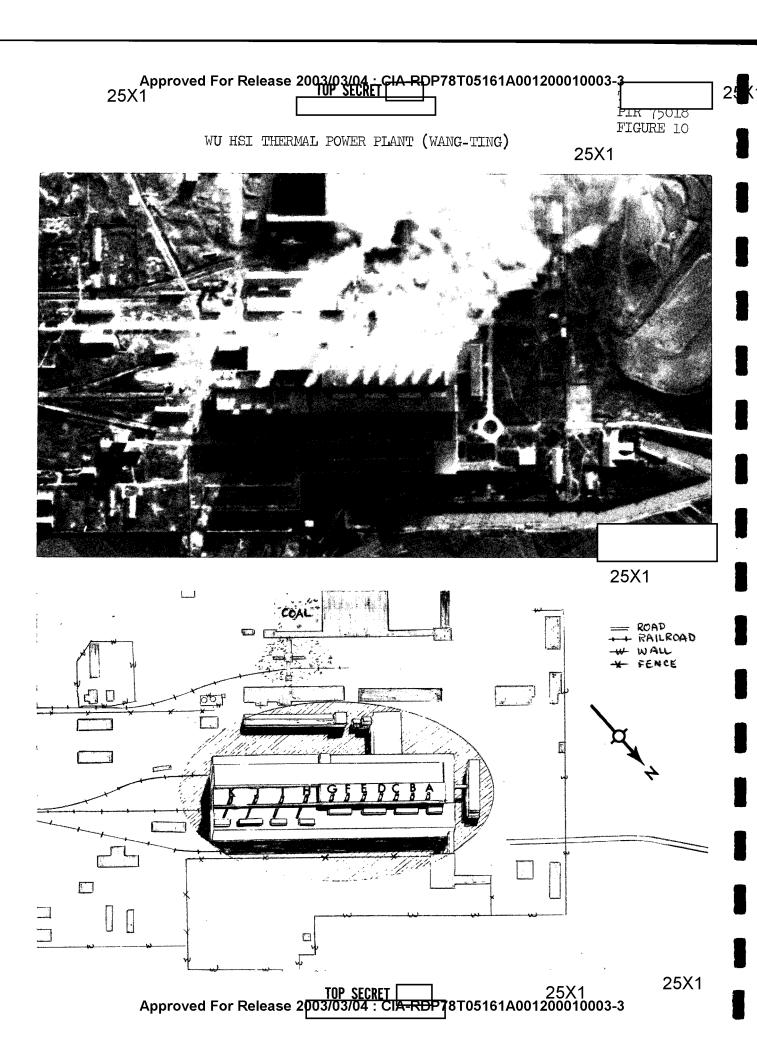
25X1

The Wu-hsi Thermal Power Plant (Wang-ting) is located on the Yun Ho (Canal) 2.4 nm south of Wu-hsi Airfield at coordinates 31 26 49N - 120 26 13E. The plant is coal-operated, rail-served, water-served and includes a large substation with control house, extensive coal storage and handling facilities, two probable oil storage tanks and numerous unidentified support type buildings.

The boilerhouse consists of two slightly dissimilar sections with a total of eleven metal stacks located on the roof. The generator hall is equipped with eight small longitudinal monitors; because of heavy shadows and smoke which covered the substation on large scale photography, no power cables could be detected.

Construction was completed on a boiler-generator section during the period

25X1



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CIA IMAGERY ANALYSIS

25X1

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25X1

WU-HSI THERMAL POWER PLANT (WANG-TING)

CONSTRUCTION ACTIVITY	LEVEL OF PRODUCTION
None	Light smoke from stacks H, I, and J. Possible light smoke from stacks C, D, E, F, and G
Construction is underway on a new boiler-generator section at southeast end of plant. Generator hall nearly completed; uprights are in place for the boiler section.	Moderate smoke from stacks A, B, C, D, E, F, H, and J.
No apparent change from	Moderate smoke from stacks A, B, C, D, E, G, H and J.
25X1	
Heavy smoke precludes analysis.	Heavy smoke from stacks A, B, C, D, and E.
Roof for new generator unit and curtain wall at southern end of building are still not in.	Moderate smoke from stacks A, B, C, D, E, F, I, and J. Light smoke from stack G.

25X1 Approved For Release 2003/03/04: CIA-RDP78T05161A001200010003-3 TOP SECRET PIR 75018

WU-HSI THERMAL POWER PLANT (WANG-TING)

	CONSTRUCTION ACTIVITY	LEVEL OF PRODUCTION		
	Roof and end of generator hall are still not in.	Moderate smoke from stacks A, B, C, D, E, F, H, and I. Light smoke from stack G.		
	Haze and obliquity preclude analysis.	Plant emitting smoke; obliquity precludes determination of specific units.		
	Southern end of plant appears complete.	Moderate smoke from all of the stacks.		
	None	Heavy smoke from stacks H, I, and J. Moderate smoke from stacks A, B, C, D, E, and F.		
	None	Heavy smoke from stacks H, I, J, and K with moderate smoke from stacks A, C, D, E, F, and G.		
		25X1		

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